PROC. ENTOMOL. SOC. WASH.
82(3), 1980, pp. 482–487

# NOTES ON SAWFLIES (HYMENOPTERA: SYMPHYTA) WITH TWO NEW SPECIES AND A KEY TO NORTH AMERICAN *LODERUS*

DAVID R. SMITH

Systematic Entomology Laboratory, IIBIII, Agric. Res., Sci. and Educ. Admin., USDA, % U.S. National Museum of Natural History, Washington, D.C. 20560.

---

*Abstract.*—Two new sawflies are described, *Empria* **evansi** from Alberta and *Loderus* **cajonensis** from California. A key is given to separate the five North American species of *Loderus*. New combinations are *Ptenus crassulus* (Cameron) and *Ptenus luteiventris* (Cameron). *Ptilia nigerrima* Cameron and *Ptenus modestius* Smith are new synonyms of *Ptenus crassulus* (Cameron); *Ptenus torridus* Smith is a new synonym of *Ptenus luteiventris* (Cameron); *Hoplocampa atriceps* Kirby is a new synonym of *Strongylogaster tacita* (Norton); and *Nematus fulvicrus* Provancher is a new synonym of *Nematus calais* Kirby.

---

In the course of my research on Symphyta, I have come across a number of changes and additions that should be made in the Symphyta section of the recent Hymenoptera Catalog (Smith, 1979a). This information is given here. References to species are found in Hymenoptera Catalog.

## ARGIDAE

Cameron (1884) described *Ptilia crassula*, *Ptilia nigerrima*, and *Ptilia luteiventris* from "Northern Sonora, Mexico." Cameron's Mexican species had never been studied, but I was able to examine them at the British Museum and found that these three belong to the genus *Ptenus* Kirby, and all are represented in the southwestern United States. *Ptilia crassula* and *nigerrima* are opposite sexes of the same species. The following changes must be made: *Ptenus crassulus* (Cameron), NEW COMBINATION (=*Ptilia nigerrima* Cameron, NEW SYNONYM; *Ptenus modestius* Smith, NEW SYNONYM); *Ptenus luteiventris* (Cameron), NEW COMBINATION (=*Ptenus torridus* Smith, NEW SYNONYM).

TENTHREDINIDAE

*Hoplocampa* (?) *atriceps* Kirby was listed in the "Unplaced Species of Nematinae" section. I was able to study this type at the British Museum and found that it is not a nematine but belongs in the subfamily Selandriinae and is the same as *Strongylogaster tacita* (Norton) (=*Hoplocampa atriceps* Kirby, NEW SYNONYM). Kirby described *atriceps* from Georgia, and it is the form of *tacita* with the orange thorax; most *tacita* specimens have a black thorax.

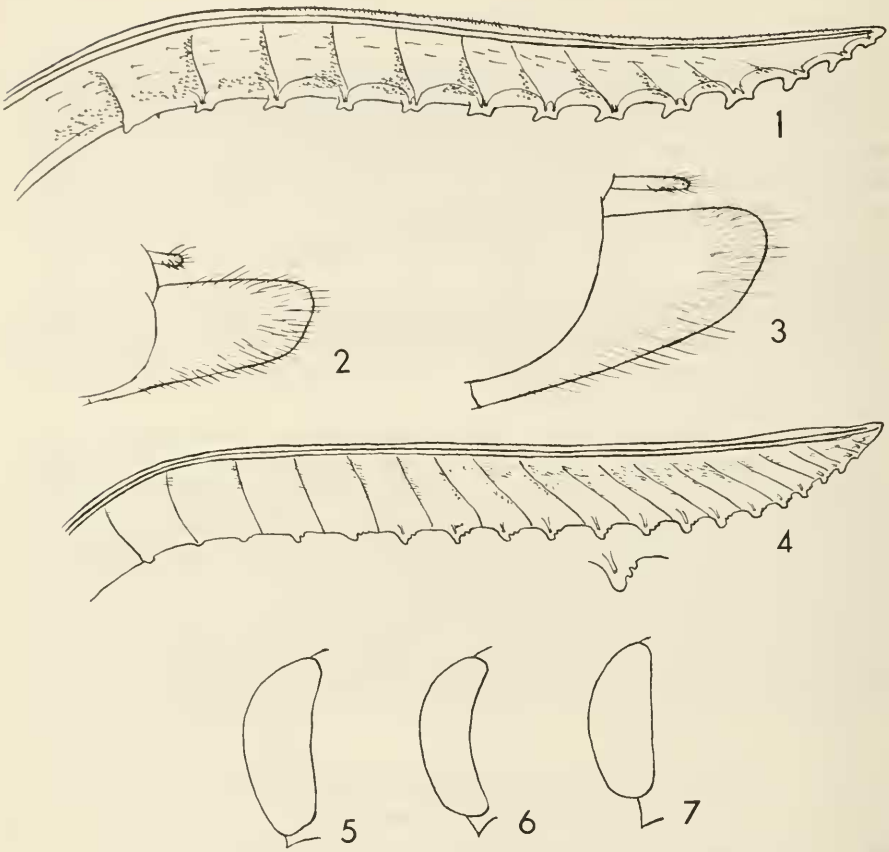
*Nematus extraneus* Kirby, listed in "Unplaced Species of Nematinae" is a *Nematus* and belongs in the *oligospilus* group of that genus. The same is true for *Nematus castaneus* Kirby, but it should be placed in the *ventralis* group of *Nematus*.

*Nematus calais* Kirby, also in "Unplaced Species of Nematinae," is the same as *Nematus fulvicrus* Provancher, and both were published in 1882. In the preface of Kirby (1882) the date July 1, 1882 is given. On the title page of the British Museum copy of the same work, the following is written: "29th July 1882 (teste R. Drumm from Official Records)." Provancher described *fulvicrus* in *Le Naturaliste canadien*, 1882, Vol. 13, No. 154, which is dated October 1882. Since Kirby's name appeared first, *calais* has priority: *Nematus calais* Kirby (=*Nematus fulvicrus* Provancher, NEW SYNONYM). All synonyms listed under *fulvicrus* can now be listed with *fulvicrus* under *calais*.

*Tethida cordigera* (Palisot de Beauvois) was described as *Tenthredo cordigera*, but this name is a junior primary homonym of *Tenthredo cordigera* Geoffroy (1785). The next available name for this sawfly, known as the black-headed ash sawfly, is *Tenthredo barda* Say; thus, *Tethida barda* (Say) should now be used as the name for this species.

*Adelomos cleone* Ross was known from only a few specimens taken in Kentucky and Illinois. I have seen an additional specimen from "Six-Mile, Ithaca, New York, May 19, 1957, Coll. C. M. Yoshimoto"; it is in the Bishop Museum, Honolulu. A unique character of *Adelemos* is the presence of a radial crossvein in the hindwing, but the New York specimen lacks this crossvein. In an occasional aberrant individual of other sawflies a radial crossvein is present in the hindwing, as in *Prolatus artus* Smith, and finding this specimen of *cleone* without the radial crossvein indicates that it is not a stable character for *Adelemos*.

The host for *Empria improba* (Cresson) has never been confirmed. Many adults have been collected by sweeping *Salix*; therefore, willow is a probable host plant. H. R. Wong, Canadian Forestry Service, Edmonton, Alberta, and I collected a large number of *improba* adults at Kananaskis Forest Experiment Station in the eastern foothills of the Rockies west of Calgary, Alberta. All were taken from *Betula pumila* L. var. *glandulifera* Regal, most




Figs. 1–2. *Empria evansi*. 1, Lancet. 2, Sheath. Figs. 3–5. *Loderus cajonensis*. 3, Sheath. 4, Lancet. 5, Eye. Fig. 6. Eye of *L. vestigialis apricus*. Fig. 7. Eye of *Dolerus* sp.

bushes being three to six feet in height. Adults were placed in a jar with the same plant, and later eggs were found inserted near the leaf edge, usually one but sometimes two eggs per leaf. This *Betula* is apparently the host, or one of the hosts, for *improba*.

*Empria evansi* Smith, New Species
Figs. 1, 2

Female.—Length, 7.5 mm. Black with following whitish: Anterior margin of clypeus, labrum, palpi, posterior margin of pronotum, narrow posterior margin of abdominal segments, paired white spots on abdominal terga 2–7 becoming smaller posteriorly, extreme apices of femora, outer surfaces of tibiae except for apex of hind tibia, basitarsi except for front basitarsus and

apical 1/5 of mid and hind basitarsi. Wings very lightly, uniformly, blackish infuscated; veins and stigma black. Head and body covered with fine white hairs; head finely punctate, with dull, granulose texture; thorax very finely punctate, somewhat shinier than head. Clypeus circularly emarginate, without tooth at center; malar space 2× diameter of front ocellus. Forewing with 1st cubital crossvein absent, thus with 3 cubital cells. Tarsal claw with small inner tooth. Antenna filiform, about 1⅓× head width. Sheath slender, rounded at apex in lateral view (Fig. 2). Lancet (Fig. 1) with 13 serrulae, each segment with serrulae, serrulae larger toward apex of lancet, each serrula anvillike, with a large anterior and a large posterior tooth, and margin between teeth concave; dorsal margin of lance crenulate on apical ½.

Male.—Unknown.

Holotype.—♀, "Canada: Alberta, 20 mi. W. Legal, George Lake, Malaise trap, V-31–VI-3-78, D. R. Smith." U.S.N.M. type no. 76341.

Remarks.—I examined several thousand specimens of *Empria* for my revision of that genus (Smith, 1979b) but never came across a specimen with such distinctive characters. For all *Empria*, genitalia should be examined for accurate identification, and, when comparing the figure of the lancet of *evansi* with those of other species (Smith, 1979b, Figs. 89–99), *evansi* can be easily separated. The black head and mesopleuron of *evansi* readily separate it from *candidata* (Fallén), *multicolor* (Norton), and *coryli* (Dyar), but the large, anvil-shaped serrulae will separate *evansi* from all species. The dull, granulose texture of the head and long sheath resemble those of *maculata* (Norton). No Palearctic species resemble *evansi*.

The specimen was collected in a Malaise trap in a forested area with dense underbrush. Other species of *Empria* collected in the same area and at the same time were *maculata* (Norton), *improba* (Cresson), and *ignota* (Norton). *Empria obscurata* (Cresson) has also been collected in the same area.

Thanks are due to George Ball and George Evans for allowing my use of the University of Alberta George Lake Field Station. The species is named for George Evans.

### *Loderus cajonensis* Smith, New Species
Figs. 3–5

Female.—Length, 7.5 mm. Black with extreme apices of femora, extreme bases of tibiae, and very narrow posterior margin of abdominal segments whitish. Head and body uniformly covered with whitish hairs, most hairs as long as 2nd antennal segment. Wings lightly, uniformly black infuscated; veins and stigma black. Antenna 1⅓× head width; 1st and 2nd segments each longer than broad; 3rd segment longer than 4th segment. Malar space narrow, almost linear; clypeus with short, circular emargination at center, about as deep as ¼ length of clypeus; eyes not distinctly emarginate on inner margins but subparallel; head abruptly narrowing behind eyes in dorsal

view. Tarsal claws with small inner tooth. Head and thorax opaque, granulose, with occasional larger punctures; mesonotum somewhat more shiny than head and rest of thorax; abdomen shining, but with dense surface sculpture. Sheath (Fig. 3) slender, without scopae, in lateral view straight above and rounded below. Lancet (Fig. 4) long, serrulae narrow, rounded at apices and with 2 posterior subbasal teeth; no spurettes or annular spines present, ornamentation consists only of short spines between segments and longer hairs toward dorsum.

Male.—Unknown.

Holotype—♀, "Cajon Pass, San Bernardino Co., California, April 18, 1965, J. D. Birchim, collector." At the California Academy of Sciences, San Francisco.

Remarks.—This is an unusual species of *Loderus* in that the eyes are not as distinctly converging below or as emarginate on their inner margins as in other species (Figs. 5, 6). The narrow malar space and small inner tooth of the tarsal claws do, however, resemble those of other *Loderus* species. *Loderus cajonensis* is separated from all other species by its black coloration, subparallel eyes, and lack of spurettes and annular spines on the lancet. Only *albifrons* lacks ornamentation on the lancet, but the serrulae of *albifrons* are flat, not long and narrow as in *cajonensis*. Lancets of other species of *Loderus* are figured by Ross (1931, pl. I, Figs. 4–6). The species name is taken from the type-locality.

Except for *cajonensis*, all North American forms of *Loderus* are considered subspecies of holarctic species (Benson, 1956). Benson's conclusions will remain unless further studies prove otherwise. Known hosts for *Loderus* species are members of the plant genus *Equisetum*. The following key will separate the North American species of *Loderus*. For figures of lancets and sheaths, see Ross (1931, pl. I).

## Key to Species of North American *Loderus*

1. Body black ..... 2
– Abdomen and legs partly rufous ..... 3
2. Eyes distinctly emarginated on inner margins (as in Fig. 6); clypeus with deep circular emargination for about ½ its length; head behind eyes and ocelli, mesosternum, and mesonotum shining between punctures; mesopleura with large, circular punctures the diameter of some equal to length of malar space; Wash., Oreg., Calif. ..... *genucinctus niger* Rohwer
– Eyes straight on inner margins (Fig. 5); emargination of clypeus short, about ¼ length of clypeus; head and thorax dull, with fine microsculpturation and uniformly textured except for mesonotum which is somewhat shining; Calif. ..... *cajonensis*, new species
3. Mesopleuron with large, circular punctures with shining ridges sep-

arating them, the diameter of some punctures equal to or more than length of malar space; N.B. s. to Va., w. to Alta., Wash., Nebr., Colo. ..... *vestigialis apricus* (Norton)

– Texture of mesopleura finely granulose, dull, without large punctures 4

4. Third antennal segment longer than 4th segment; tarsal claw with small inner tooth; female posttergite densely microsculptured; sheath large, broad, concave on ventro-apical margin with short downward projecting spine at apex; lancet without annular spines; Que., Maine, Pa., w. to Alaska, Alta., Ill.; east Asia ..... ..... *eversmanni acidus* MacGillivray

– Third and 4th antennal segments subequal in length; tarsal claw simple; posttergite smooth, shining; female sheath small, narrow, evenly rounded at apex and without spine; lancet without distinct annular spines; Newfoundland s. to N.Y., w. to Alaska, Alta., Calif.; east Asia ..... *pratorum albifrons* (Norton)

## Acknowledgments

I express appreciation to the following who have helped in my work: John Quinlan, British Museum (Natural History), London; Gordon M. Nishida, Bernice P. Bishop Museum, Honolulu, Hawaii; H. R. Wong, Canadian Forestry Service, Northern Forest Research Centre, Edmonton, Alberta; George Ball and George Evans, Department of Entomology, University of Alberta, Edmonton, Alberta; and Paul H. Arnaud, Jr., California Academy of Sciences, San Francisco.

## Literature Cited

Benson, R. B. 1956. Studies in Dolerini (Hymenoptera: Symphyta). Proc. R. Entomol. Soc. Lond. (B) 25: 55–63.

Cameron, P. 1884. Descriptions of new species of Tenthredinidae and Cynipidae from Mexico. Trans. Entomol. Soc. Lond., pp. 481–488.

Geoffroy, E. L. 1785. *In* A. F. de Fourcroy [ed.], Entomologia Parisiensis, sive catalogus insectorum, quae in agro parisiensi reperiuntur, secundum methodum Geoffraeanum in sectiones genera et species distributa, V. 2. Paris, 311 pp.

Kirby, W. F. 1882. List of Hymenoptera with descriptions and figures of the typical specimens in the British Museum, Vol. 1. Tenthredinidae and Siricidae. London, 450 pp.

Provancher, L. 1882. Faune Canadienne, Hyménoptères, Additions and Corrections. Nat. Can. 13: 289–311.

Ross, H. H. 1931. Sawflies of the sub-family Dolerinae of America north of Mexico. Ill. Biol. Monogr. 12: 1–116.

Smith, D. R. 1979a. Symphyta, pp. 3–137. *In* Krombein, K. V. et al., eds., Catalog of Hymenoptera in America north of Mexico, Vol. 1, pp. 1–1198. Smithsonian Institution Press, Washington, D.C.

———. 1979b. Nearctic sawflies IV. Allantinae: Adults and larvae (Hymenoptera: Tenthredinidae). U.S. Dep. Agric. Tech. Bull. 1595, 172 pp.